WHAT IS CLAIMED IS:

1.   A multi-function printer which is a combination of a scanner and a printer, comprising:

a first data storage in which a scan data scanned in by the scanner is stored;

a print executer which generates a print image data having a data format suitable for a print processing on the basis of the scan data stored in the first data storage and performs printing by a print pass driving a print head of the printer with the print head moved on the basis of the print image data; and

a data classifier which classifies the scan data in a format suitable for generating the print image data and stores it in the first data storage.

2.   The multi-function printer as set forth in claim 1, wherein a resolution of the printer head is coarser than a resolution to be printed on a print medium by the printer, and the printer performs printing by a plurality of print passes for one line of the scan data.

3.   The multi-function printer as set forth in claim 2, wherein the data classifier classifies the scan data into compliance with the print passes.

4.   The multi-function printer as set forth in claim 2, wherein the print passes for one line of the scan data are twice, and the data classifier classifies the scan data into even bits thereof and odd bits thereof and stores them in the first data storage.

5.   The multi-function printer as set forth in claim 1, wherein the data classifier comprising:

a second data storage in which the scan data scanned in by the scanner is temporarily stored; and

a classificational executer which read out the scan data

from the second data storage, classifies it and stores it in the first data storage.

6.   The multi-function printer as set forth in claim 5, wherein the classificational executer classifies the scan data into even bits and odd bits, and stores data of the even bits of the scan data in an even bit data storage in the first data storage every line of the scan data and stores data of the odd bits of the scan data in an odd bit data storage in the first data storage every line of the scan data,

wherein the print executer executes an interlaced processing that the scan data is extracted from the even bit data storage and the odd bit data storage every other line respectively, and executes the printing.

7.   The multi-function printer as set forth in claim 6, wherein the classificational executer has a latch buffer of a predetermined data length, and latches the scan data of the predetermined data length into the latch buffer and obtains the scan data to be stored in the even bit data from even bits of the latch buffer and the scan data to be stored in the odd bit data from odd bits of the latch buffer.

8.   The multi-function printer as set forth in claim 6, wherein the classificational executer comprising:

an even look up table in which even bit data obtainable by extracting even bits from the scan data of the predetermined data length are stored for all patterns of the scan data of the predetermined data length; and

an odd look up table in which odd bit data obtainable by extracting odd bits from the scan data of the predetermined data length are stored for all patterns of the scan data of the predetermined data length,

wherein the classificational executer reads out the scan data from the second data storage by the predetermined data length for every time and compares the read-out scan data with the even look up table so that the scan data to be stored in the even

bit data storage is obtained, and compares the read-out scan data with the odd look up table so that the scan data to be stored in the odd bit data storage is obtained.

9.   The multi-function printer as set forth in claim 6, wherein the print executer alternately repeats:

a processing for reading out the scan data from one of the even bit data storage and the odd bit data storage every K lines, performing one print pass and feeding the print medium by F lines, and;

a processing for reading out the scan data from the other of the even bit data storage and the odd bit data storage every K lines, performing one print pass and feeding the print medium by F lines,

wherein relationship between the K and the F is prime to each other.

10.   The multi-function printer as set forth in claim 6, wherein the classificational executer is constituted of hardware.

11.   The multi-function printer as set forth in claim 10, wherein the interlaced processing executed in the print executer is performed as a software processing.

12.   The multi-function printer as set forth in claim 11, wherein the software processing is executed in a central processing unit, which is shared between the scanner and the printer and which is the only one in the multi-function printer.

13.   The multi-function printer as set forth in claim 5, wherein the first data storage and the second data storage are provided in different memories.

14.   A multi-function printer which is a combination of a scanner and a printer and capable of printing one line of a scan data, which is scanned in by the scanner, in the printer by movements of a print head in a main scan pass direction by X

times, comprising:

a classificational storing section which classifies the scan data according to an appropriate data format for each time of the X times of the movement of the print head in the main scan pass direction and which stores them in a first data storage;

a print image data generator which sequentially reads out the classified scan data from the first data storage and generates a print image data on the basis of the read-out scan data every reading out; and

a print executer which executes printing with the print head moved in the main scan pass direction on the basis of the print image data generated by the print image data generator.

15.   The multi-function printer as set forth in claim 14, wherein the classificational storing section is constituted of hardware.

16.   The multi-function printer as set forth in claim 15, wherein the print image data generator is implemented via a software processing, and the multi-function printer has only one central processing unit, which executes the software processing and which is shared between the scanner and the printer.

17.   The multi-function printer as set forth in claim 14, wherein the print image data generator also executes an interlaced processing that data is extracted from the scan data stored in the first data storage every predetermined lines.

18.   The multi-function printer as set forth in claim 14, further comprising a second data storage in which the scan data scanned in by the scanner is temporarily stored,

wherein the classificational storing section sequentially reads out the scan data from the second data storage and classifies them.

19.   A control method for a multi-function printer, which is

a combination of a scanner and a printer, comprising the steps of:

classifying a scan data scanned in by the scanner according to an appreciate format for generating a print image data in actual printing;

storing the classified scan data in a first data storage under classified conditions;

generating the print image data, which has a data format appropriate for a print processing, on the basis of the scan data stored in the first data storage; and

performing the print processing by a print pass with a print head of the printer moved on the basis of the print image data.

20.   A control method for a multi-function printer which is a combination of a scanner and a printer and capable of printing one line of a scan data, which is scanned by the scanner, in the printer by movements of a print head in a main scan pass direction by X times, comprising the steps of:

classifying the scan data according to an appropriate data format for each of the X times of the movement of the print head in the main scan pass direction;

storing the classified scan data in a first data storage;

reading out the classified scan data sequentially from the first data storage to generates a print image data on the basis of the scan data every reading out; and

executing printing with the print head moved in the main scan pass direction on the basis of the generated print image data.